

From: [Bill Jacobs](#)
To: [Laura Parsons](#); [Dan Peacock](#); [John Hebert](#); [Meredith Laws](#)
Cc: [Rosalind Gross](#)
Subject: Fw: Bait Stations
Date: 12/19/2008 02:47 PM


FYI

----- Forwarded by Bill Jacobs/DC/USEPA/US on 12/19/2008 02:44 PM -----

**Bill
Jacobs/DC/USEPA/US**

To "Dale Kaukeinen" <dkaukeinen@comcast.net>
cc

12/19/2008 02:43 PM

Subject Re: Bait Stations 

Prior to the "RMD", relative unit cost seemed to be the biggest drawback to market penetration for would-be ready-to-use tamper-resistant bait stations. No design that was even halfway protective could compete, pricewise, with a similar amount of bait sold in a box, in placepacks, or in bait trays. Although the RMD intends to make at least one bait station a part of every rodenticide bait purchase at "consumer" outlets, it seems reasonable to expect that relative cost still would affect customers' purchasing decisions.

The cheapest item that the RMD would have on the consumer market would be one Tier 4 bait station with enough bait for a single placement to control house mice. Without adding much to the cost, that same bait station -- if refillable -- could have extra baits ("refills") included in the retail package. With extra baits available, there clearly would be a level of temptation among consumers not to wait for the bait station to be depleted of bait and to apply at least some of the additional baits *sans* bait station. The sealed dispenser idea that you mention would inhibit such off-label use, but would tie up the baits to a single placement at which they would age with some degree of exposure to environmental conditions, perhaps including rodent wastes and other secretions. Tier 4 stations are to be limited by their labeling to use in locations where exposures of pets and young children are unlikely. Stations in Tiers 1, 2, and 3 would differ from Tier 4 units by virtue of having been shown to be somewhat protective of children and perhaps dogs as well. Clearly, Tier 4 stations might include units that had not been subjected to such testing or had failed such testing. In either case, it would be likely that Tier 4 stations would be cheaper to produce than those in Tiers 1, 2, and 3.

If you have a client that wants to market baits in or with Tier 1 bait stations, then you are looking at designs that meet the criteria for tamper-resistant bait stations as listed in PR Notice 94-7. On the "mouse" market, there might be a niche for single-use, ready-to-use tamper-resistant units because: (a) it might be possible to produce such products at a relatively low cost, considering the intended disappearance of the box, placepack, and bait-tray products from the consumer market; (b) sealed units might hold up better than refillables against the rigors of safety testing; and (c) adding features for opening, reloading, and reclosing mouse-size bait stations might add significantly to their development and production costs and/or detract from users' abilities to keep the units protective after reloading.

Refillable Tier 1 mouse stations would be feasible to produce, but likely would be quite expensive on a per-placement basis. Not only might there be some reluctance among consumers to service refillable units, there also are apt to be assorted operations of Murphy's Law when they attempt to.

On the "rat" market, the size needed for the unit to accommodate the target species and to be protective of children, pets, and other nontarget organisms of concern might well make a single-use rat station a non-starter. With a rat-sized unit, tabs, other locking mechanisms, and the unit in general could be made sturdier than with a mouse station, but the rodent entrances would have to be much bigger, large enough for a child to put a hand through and get the arm in perhaps up to the elbow, absent internal baffling. Due to rats' covering more ground than mice (typically) and their greater willingness to "chow down" at one locus, fewer placements should be needed per unit area in controlling rat infestations.

The internal dispenser idea would be easier to pull off in a rat-sized station due to its larger size. Put another way, adding an internal dispenser to a mouse station might lead to having a rat-sized station that only accommodates mice. A mouse station with an internal dispenser would limit the amount of bait exposed to mice at any one time to quantities that are approximately consistent with current labels and would deny consumers access to the remainder of the purchased bait, keeping it from being used or stored inappropriately. Whether users would want to pay extra to have most of the purchased bait tied up in the station is another question. As long as there is a potential for loose bait blocks to be obtained along with bait stations, I suspect that there will be customers for that type of product. The station with the internal dispenser would seem to be the safer product, especially if the station warrants Tier 1 status. You are correct that the sealed station would come closer to meeting the main objective of the RMD.

Dan Sherman's translucent blue stations were of that color because he had convinced himself -- presumably through observations -- that it was clear enough to permit observations of bait presence and condition and dark enough inside the station so as not to inhibit entry and feeding by rats and mice. Something like that might be cheaper and stronger than putting in a specially designed observation window or other depletion indicator. Sherman's patents went to ICI/Zeneca but probably have expired by now. Obviously, that situation should be checked out.

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To Bill Jacobs/DC/USEPA/US@EPA
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12/18/2008 12:05 PM

Subject Bait Stations

Hello Bill

Hope all is well with you and the Agency. I have parted ways with some clients that

seem intent on fighting the RMD and have instead enjoyed helping other move forward to be in a position to meet the new requirements.

The two of us probably have more bait station experience than just about anyone around. Of course a lot of it is really reflective only of stations used by professionals, so to some extent the RMD requirements for retail represent a new situation where everyone will have to feel their way along. I suppose you are fielding a lot of questions on what stations will meet the RMD requirements, so here are mine!

As far as pure concepts go, it would seem that two general approaches would meet the RMD requirements. One would involve a sealed, prefilled station that would be disposed of after use. The other would involve a station with refills that would be such to preclude hazards during storage and refilling.

I am not sure what to advise my clients regarding the relative merits of these different approaches, so some are dual tracking design work in both areas. It would seem to me that a sealed station that does not need servicing would better meet the intent of the RMD. If this thinking is reasonable, then the question becomes whether (with first-gen anticoagulants or allowed acutes) to have enough to just kill one or a few rodents, or to try to have some 'feeder' design that will hold the pound (or less) bait while mechanically ensuring it 'moves' into the feeding chamber to replace consumed bait and to keep a 'fresh bait face' to rodents entering the station. This would prolong the useful life of such a station and potentially kill more rodents.

The latter approach gets into some possibly sophisticated design work and has few parallels with the professional stations we are all familiar with. But is this a worthy approach?

It is far cheaper and easier to design something closer to the existing professional stations (small with 3-4 oz of bait), but with a 'refill pack' that is unique to the station, minimizes human hazard, and limits ability to use outside of the intended protective station. Limited market research suggests, however, that consumers may be reluctant to 'service' such stations and would need instruction and perhaps station cues to help them know when replenishing the bait is needed.

As a theoretical design question, can you see advantages that should direct manufacturers more in one direction (as described above) or the other? I would like to see the RMD stimulate some innovation in the stations (which is also more fun for me), but am not sure that this is practical for manufacturers, many of whom have this new retail station as a first entry in this category.

Any general guidance would be appreciated, or we can discuss by phone.

Thanks!

Dale